

PATENT APPLICATION: US/10/646,221

DATE: 07/30/2004 TIME: 14:04:28

Input Set : N:\Crf3\RULE60\10646221.raw Output Set: N:\CRF4\07302004\J646221.raw

```
1 <110> APPLICANT: Patten, Phillip
          Stemmer, Willem P.C.
  3 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR POLYPEPTIDE ENGINEERING
  4 <130> FILE REFERENCE: 02-020503US
  5 <140> CURRENT APPLICATION NUMBER: US/10/646,221
  6 <141> CURRENT FILING DATE: 2003-08-22
  7 <150> PRIOR APPLICATION NUMBER: US/09/559,671
  8 <151> PRIOR FILING DATE: 2000-04-27
  9 <150> PRIOR APPLICATION NUMBER: 08/769,062
 10 <151> PRIOR FILING DATE: 1996-12-18
 11 <150> PRIOR APPLICATION NUMBER: 08/198,431
 12 <151> PRIOR FILING DATE: 1994-02-17
                                                      ENTERED
 13 <150> PRIOR APPLICATION NUMBER: 08/425,684
 14 <151> PRIOR FILING DATE: 1995-04-18
15 <150> PRIOR APPLICATION NUMBER: 08/537,874
16 <151> PRIOR FILING DATE: 1995-10-30
17 <160> NUMBER OF SEQ ID NOS: 101
18 <170> SOFTWARE: PatentIn Ver. 2.0
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 50
22 <212> TYPE: DNA
23 <213> ORGANISM: Artificial Sequence
24 <220> FEATURE:
25 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
        oligonucleotide used for codon usage library
27 <400> SEQUENCE: 1
         aaccctccag ttccgaaccc catatgatga tcaccctgcg taaactgccg
                                                                            50
30 <210> SEQ ID NO: 2
31 <211> LENGTH: 38
32 <212> TYPE: DNA
33 <213> ORGANISM: Artificial Sequence
34 <220> FEATURE:
35 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
         oligonucleotide used for codon usage library
37 <400> SEQUENCE: 2
         aaccctccag ttccgaaccc catatgaaaa aaaccgct
                                                                           38
40 <210> SEQ ID NO: 3
41 <211> LENGTH: 40
42 <212> TYPE: DNA
43 <213> ORGANISM: Artificial Sequence
44 <220> FEATURE:
45 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
```

oligonucleotide used for codon usage library

46

PATENT APPLICATION: US/10/646,221

DATE: 07/30/2004 TIME: 14:04:28

Input Set : N:\Crf3\RULE60\10646221.raw
Output Set: N:\CRF4\07302004\J646221.raw

```
47 <400> SEQUENCE: 3
 48
          aaccctccag ttccgaaccc atatacatat gcgtgctaaa
                                                                              40
 50 <210> SEQ ID NO: 4
 51 <211> LENGTH: 44
 52 <212> TYPE: DNA
 53 <213> ORGANISM: Artificial Sequence
 54 <220> FEATURE:
 55 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
          oligonucleotide used for codon usage library
 57 <400> SEQUENCE: 4
 58
          aaccctccag ttccgaaccc catatgaaat acctgctgcc gacc
                                                                             44
 60 <210> SEQ ID NO: 5
 61 <211> LENGTH: 40
 62 <212> TYPE: DNA
 63 <213> ORGANISM: Artificial Sequence
 64 <220> FEATURE:
 65 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
 66
          oligonucleotide used for codon usage library
 67 <400> SEQUENCE: 5
          aaccetecag tteegaacce gatatacata tgaaacagte
                                                                             40
 70 <210> SEQ ID NO: 6
 71 <211> LENGTH: 60
 72 <212> TYPE: DNA
 73 <213> ORGANISM: Artificial Sequence
 74 <220> FEATURE:
75 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
         oligonucleotide used for codon usage library
77 <400> SEQUENCE: 6
         tggtgttatg tctgctcagg cdatggcdgt dgayttycay ctggttccgg ttgaagagga 60
78
80 <210> SEQ ID NO: 7
81 <211> LENGTH: 60
82 <212> TYPE: DNA
83 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
         oligonucleotide used for codon usage library
87 <400> SEQUENCE: 7
         ggctggtttc gctaccgttg cdcargcdgc dccdaargay ctggttccgg ttgaagagga 60
90 <210> SEQ ID NO: 8
91 <211> LENGTH: 60
92 <212> TYPE: DNA
93 <213> ORGANISM: Artificial Sequence
94 <220> FEATURE:
95 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate
         oligonucleotide used for codon usage library
97 <400> SEQUENCE: 8
        caccecgate getatetett cyttygedte yacyggytey etggtteegg ttgaagagga 60
98
100 <210> SEQ ID NO: 9
101 <211> LENGTH: 60
```

PATENT APPLICATION: US/10/646,221

DATE: 07/30/2004 TIME: 14:04:28

Input Set : N:\Crf3\RULE60\10646221.raw
Output Set: N:\CRF4\07302004\J646221.raw

102 <212> TYPE: DNA 103 <213> ORGANISM: Artificial Sequence 104 <220> FEATURE: 105 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 107 <400> SEQUENCE: 9 gctgctggct gctcagccgg cdatggcdat ggayatyggy ctggttccgg ttgaagagga 60 108 110 <210> SEQ ID NO: 10 111 <211> LENGTH: 61 112 <212> TYPE: DNA 113 <213> ORGANISM: Artificial Sequence 114 <220> FEATURE: 115 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 117 <400> SEQUENCE: 10 tgccgctgct gttcaccccg gtdacyaarg cdgcdcargt dctggttccg gttgaagagg 60 118 119 121 <210> SEQ ID NO: 11 122 <211> LENGTH: 60 123 <212> TYPE: DNA 124 <213> ORGANISM: Artificial Sequence 125 <220> FEATURE: 126 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 128 <400> SEQUENCE: 11 cccggctttc tggaaccgtc argcdgcdca rgcdctggac gttgctaaaa aactgcagcc 60 131 <210> SEQ ID NO: 12 132 <211> LENGTH: 60 133 <212> TYPE: DNA 134 <213> ORGANISM: Artificial Sequence 135 <220> FEATURE: 136 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 137 138 <400> SEQUENCE: 12 acgttatcct gttcctgggt gayggyatgg gygtdccdac cgttaccgct acccgtatcc 60 141 <210> SEQ ID NO: 13 142 <211> LENGTH: 60 143 <212> TYPE: DNA 144 <213> ORGANISM: Artificial Sequence 145 <220> FEATURE: 146 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 148 <400> SEQUENCE: 13 aaactgggtc cggaaacccc dctggcdatg gaycarttyc cgtacgttgc tctgtctaaa 60 151 <210> SEQ ID NO: 14 152 <211> LENGTH: 60 153 <212> TYPE: DNA

155 <220> FEATURE:

154 <213> ORGANISM: Artificial Sequence

PATENT APPLICATION: US/10/646,221

DATE: 07/30/2004 TIME: 14:04:28

Input Set : N:\Crf3\RULE60\10646221.raw
Output Set: N:\CRF4\07302004\J646221.raw

156 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 157 158 <400> SEQUENCE: 14 ggttccggac tctgctggta cygcdacygc dtayctgtgc ggtgttaaag gtaactaccg 60 159 161 <210> SEQ ID NO: 15 162 <211> LENGTH: 60 163 <212> TYPE: DNA 164 <213> ORGANISM: Artificial Sequence 165 <220> FEATURE: 166 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate 167 oligonucleotide used for codon usage library 168 <400> SEQUENCE: 15 169 ctgctcgtta caaccagtgc aaracyacyc gyggyaayga agttacctct gttatgaacc 60 171 <210> SEQ ID NO: 16 172 <211> LENGTH: 60 173 <212> TYPE: DNA 174 <213> ORGANISM: Artificial Sequence 175 <220> FEATURE: 176 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 178 <400> SEQUENCE: 16 tetgttggtg ttgttaccac yacyegygtd carcaygedt etceggetgg tgettacget 60 179 181 <210> SEQ ID NO: 17 182 <211> LENGTH: 60 183 <212> TYPE: DNA 184 <213> ORGANISM: Artificial Sequence 185 <220> FEATURE: 186 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 188 <400> SEQUENCE: 17 gtactctgac gctgacctgc cdgcdgaygc dcaratgaac ggttgccagg acatcgctgc 60 189 191 <210> SEQ ID NO: 18 192 <211> LENGTH: 60 193 <212> TYPE: DNA 194 <213> ORGANISM: Artificial Sequence 195 <220> FEATURE: 196 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 198 <400> SEQUENCE: 18 acatcgacgt tatcctgggt ggyggycgya artayatgtt cccggttggt accccggacc 60 199 201 <210> SEQ ID NO: 19 202 <211> LENGTH: 60 203 <212> TYPE: DNA 204 <213> ORGANISM: Artificial Sequence 205 <220> FEATURE: 206 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate 207 oligonucleotide used for codon usage library 208 <400> SEQUENCE: 19 tctgttaacg gtgttcgtaa rcgyaarcar aayctggtdc aggcttggca ggctaaacac 60 209

PATENT APPLICATION: US/10/646,221

DATE: 07/30/2004 TIME: 14:04:28

Input Set : N:\Crf3\RULE60\10646221.raw
Output Set: N:\CRF4\07302004\J646221.raw

211 <210> SEQ ID NO: 20 212 <211> LENGTH: 60 213 <212> TYPE: DNA 214 <213> ORGANISM: Artificial Sequence 215 <220> FEATURE: 216 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 217 218 <400> SEQUENCE: 20 gaaccgtacc getetgetge argedgedga ygaytcytet gttacccacc tgatgggtet 60 219 221 <210> SEQ ID NO: 21 222 <211> LENGTH: 60 223 <212> TYPE: DNA 224 <213> ORGANISM: Artificial Sequence 225 <220> FEATURE: 226 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate 227 oligonucleotide used for codon usage library 228 <400> SEQUENCE: 21 aatacaacgt tcagcaggac cayacyaarg ayccdacyct gcaggaaatg accgaagttg 60 231 <210> SEQ ID NO: 22 232 <211> LENGTH: 60 233 <212> TYPE: DNA 234 <213> ORGANISM: Artificial Sequence 235 <220> FEATURE: 236 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 238 <400> SEQUENCE: 22 aaccegegtg gtttctacct gttygtdgar ggyggyegya tegaceaegg teaccaegae 60 241 <210> SEQ ID NO: 23 242 <211> LENGTH: 60 243 <212> TYPE: DNA 244 <213> ORGANISM: Artificial Sequence 245 <220> FEATURE: 246 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate oligonucleotide used for codon usage library 248 <400> SEQUENCE: 23 gaccgaagct ggtatgttcg ayaaygcdat ygcdaargct aacgaactga cctctgaact 60 251 <210> SEQ ID NO: 24 252 <211> LENGTH: 60 253 <212> TYPE: DNA 254 <213> ORGANISM: Artificial Sequence 255 <220> FEATURE: 256 <223> OTHER INFORMATION: Description of Artificial Sequence: degenerate 257 oligonucleotide used for codon usage library 258 <400> SEQUENCE: 24 ccgctgacca ctctcacgtt ttytcyttyg gyggytayac cctgcgtggt acctctatct 60 259 261 <210> SEQ ID NO: 25 262 <211> LENGTH: 60

263 <212> TYPE: DNA

264 <213> ORGANISM: Artificial Sequence

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/646,221

DATE: 07/30/2004 TIME: 14:04:29

Input Set : N:\Crf3\RULE60\10646221.raw
Output Set: N:\CRF4\07302004\J646221.raw